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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/905,532	07/14/2001	Antony John Rogers	063170.6291	3485

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BAKER BOTTS L.L.P.  
2001 ROSS AVENUE  
SUITE 600  
DALLAS, TX 75201-2980

EXAMINER
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PYZOCHA, MICHAEL J

ART UNIT	PAPER NUMBER
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2137

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	04/12/2007	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 04/12/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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**Office Action Summary**

Application No.

09/905,532

Applicant(s)

ROGERS ET AL.

Examiner

Michael Pyzocha

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,4,8-16 and 20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4,8-16 and 20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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**DETAILED ACTION**

1. Claims 1, 4, 8-16, and 20 are pending.
2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 02/20/2007 has been entered.

***Claim Rejections - 35 USC § 101***

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 12-16 and 20 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 12 and 13 relate to a computer data signal, which fails to fall within one of the categories of patentable subject matter. Similarly, claims 14-16 and 20 relate to an apparatus with components, in these claims there is not explicit hardware and these components may merely be software (see paragraph 30 of the specification. Therefore, these claims lack the necessary

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physical articles or objects to constitute a machine or a manufacture within the mean of 35 USC 101. They are clearly not a series of steps or acts to be a process not are they a combination of chemical compounds to be a composition of matter. As such, they fail to fall within a statutory category. They are, at best, functional descriptive material per se.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 4 and 10-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Chess (US 6192512).

As per claims 1, 10, 11, 12, and 14, Chess discloses a method of detecting viral code in subject files, comprising: creating an artificial memory region spanning one or more

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components of the operating system (see Fig. 2 column 4 lines 49-51); emulating execution of at least a portion of computer executable code in a subject file (see column 4 lines 33-49); detecting an attempt by the emulated computer executable code to access the artificial memory region; and determining based on the attempt to access the artificial memory region that the emulated computer executable code is viral (see column 4 lines 49-54).

As per claims 4 and 16, Chess discloses emulating functionality of the identified operating system call while monitoring the operating system call to determine whether the computer executable code is viral (see column 4 lines 33-54).

As per claims 13 and 15, Chess discloses a fourth segment comprising auxiliary code, wherein the auxiliary code determines an operating system call that the emulated computer executable code attempted to access; a fifth segment comprising analyzer code, wherein the analyzer code monitors the operating system call to determine whether the computer executable code is viral, while emulation continues (see column 4 lines 33-54).

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5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 8, 9, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chess as applied to claims 1 and 14 above, in view of Golan (US 5974549).

As per claim 8, Chess fails to disclose monitoring access by the emulated computer executable code to dynamically linked functions.

However, Golan teaches monitoring access by the emulated computer executable code to dynamically linked functions (Col 6, lines 6-12; Col 5, lines 60-63); and Golan describes a security monitor method whereby access to dynamically linked functions is regulated because, as Golan discloses, "in an operating system that supports virtual memory and hardware abstraction, a software component can only breach security by calling a system call" (Col 5, lines 38-41).

It would have been obvious to one of ordinary skill in that art at the time the invention was filed to have combined the

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teachings of Chess with those of Golan and monitor access to dynamically linked functions because requesting access to dynamically linked functions could be an attempt to breach security.

As per claim 9, the applicant discloses the method of claim 8, which is met by Chess in view of Golan (see above), with the following limitation which is met by Golan:

Wherein the artificial memory region spans a jump table containing pointers to the dynamically linked functions (Col 7, lines 31-35).

Chess in view of Golan describes all the limitations of claim 8. Golan describes the additional limitation of a jump table containing pointers to the dynamically linked functions. The jump table is often incorporated with dynamically linked functions to store the actual addresses of the dynamically linked functions. It would have been obvious to one of ordinary skill in the art at the time in the invention was filed to have included a jump table with the method so that there could be a way of storing the actual addresses of the dynamically linked functions.

As per claim 20, the applicant discloses the method of claim 14, which is met by Chess (see above), with the following limitation which is met by Golan:

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Wherein the artificial memory region created by the memory manager component spans a jump table containing pointers to dynamically linked functions, and the monitor component monitors access by the emulated computer executable code to the dynamically linked functions.

The claim is met by the combination of claims 8 and 9. Explanations for claim 8 and 9 rejections are listed above.

### ***Response to Arguments***

7. Applicant's arguments with respect to claims 1, 4, 8-16, and 20 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Nachenberg, Kouznetsov, and Schnurer teach methods of detecting viruses using artificial memory.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Pyzocha whose telephone number is (571) 272-3875. The examiner can normally be reached on 7:00am - 4:30pm first Fridays of the bi-week off.



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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Emmanuel Moise can be reached on (571) 272-3865. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MJP

  
EMMANUEL L. MOISE  
SUPERVISORY PATENT EXAMINER